

(54) Title of the invention : PORTABLE SYSTEM AND METHOD FOR THE DETECTION AND IDENTIFICATION OF WATERBORNE MICRO-ORGANISM

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(57) Abstract :
 Title: Portable System and Method for the Detection and Identification of Waterborne Micro-Organism. A portable system and method for the detection and identification of waterborne micro-organisms is disclosed. The system comprises of a water sample handling unit featuring a glass slide (6) to receive water sample, multiple containers holding reagents and at least one container (3) having distilled water, wherein the water sample is selectively and sequentially treated with reagents followed by distilled water, wherein clear and vivid images of the microorganisms present in the water sample is captured by the imaging module (9). The captured images are then preprocessed and analyzed by a deep learning module, which classifies the microorganisms based on colour, and assign confidence scores to the predictions. Based on the confidence scores, the detection module predicts the type of microorganisms present in the water sample. FIG.1

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